

Date: Tuesday, 19/08/2008 1:21:28 PM
 User: Julie Lecocq

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : SINGLE MIRROR ASSEMBLY
Job Number : 41317	
Estimate Number : 12277	
P.O. Number :	Part Number : D206558041
This Issue : 19/08/2008 S.O. No. :	Drawing Number : IIN206-558 U/R <i>PH</i>
Prsht Rev. : NC	Project Number : N/A
First Issue : 1/1 Type : SMALL / MED FAB	Drawing Revision : C <i>WR</i> <i>08.08.19</i> <i>4</i>
Previous Run : 41317	Material :
Written By :	Due Date : 08/09/2008 Qty: <i>1</i> Um: Each
Checked & Approved By : <i>JU 08-8-19</i>	
Comment : Est. F 02.09.19 Re-format; Incorporated D2065 KJ Est Rev:G 08-05-14 now @ chg006/ add D3778-1 per ECN1171 DD verified:ec Est Rev:H 08-08-19 now @ chg 007 DD verified by:ec	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	DC	DOCUMENT CONTROL
-----	----	------------------



for JD 08.8.26



Comment: DOCUMENT CONTROL

Photocopy bluefile and type labels as per PPP D206-558-041 CHG007

08/08/24

2.0	D2011101	6" Mirror
-----	----------	-----------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Mirror 6"

Pick:

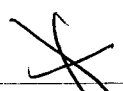
Qty Part Number Description Batch

1 D2011-101 Mirror

B43235

SP

3.0	D2065	Arm
-----	-------	-----



B40740



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Arm

SP

4.0	D2052	Mounting Bracket
-----	-------	------------------



(4x)

Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Bracket

Pick:

Qty Part Number Description Batch

2 D2052 Bracket

(6)

(2)

B17216

36617

8/11/21

SP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SINGLE MIRROR ASSEMBLY

Job Number: 41317

Part Number: D206558041

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

D2054

Bushing



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bushing - Delrin

Pick:

Qty Part Number Description Batch

2 D2054

Bushing

B26711

B39433

sq

6.0

D2055

Clamp



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Clamp

Pick:

Qty Part Number Description Batch

1 D2055

Clamp

B28823

B34365

sq

7.0

D2056

Bell Crank



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Bell Crank Assembly

Pick:

Qty Part Number Description Batch

1 D2056

Bellcrank

B17049

B39434

sq

8.0

D2057

Plug



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Plug

Pick:

Qty Part Number Description Batch

1 D2057

Plug

B34048

sq

9.0

AN960JD10

Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Washer

Pick:

Qty Part Number Description Batch

4 AN960JD10

Washer

M109059

8/11/21

(4x)

sq

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 19/08/2008 1:21:29 PM
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SINGLE MIRROR ASSEMBLY

Job Number: 41317

Part Number: D206558041

Job Number:



Seq. #:

Machine Or Operation:

Description :

10.0

MS21042L3

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Nut

Pick:

Qty Part Number

Description

Batch

2 MS21042L3

Nut

M109031

or MS21042-3

11.0

MS27039118

Screw



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Screw

Pick:

Qty Part Number

Description

Batch

2 MS27039-1-18

Screw

M10016

8/11/21

SP

12.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble as per Dwg D206-558

8/08/11/24

(4)

13.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

8/08/11/24 (4)

14.0

D37781

Bracket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Bracket

batch:

B39283

B341958

SP

15.0

D2053

Mounting Bracket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Bracket

Pick: Packing Kit

Qty Part Number

Description

Batch

1 D2053

Bracket

B35362

8/11/21

(4)

SP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Job Number: 41317

Part Number: D206558041

Job Number:



Seq. #:

Machine Or Operation:

Description :

16.0

D2067

Connector



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Connector

Pick: Packing Kit

Qty Part Number

1 D2067

Description

Connector

Batch

1337483

1339558

SD

17.0

D2071

Cable Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Cable Assembly

Pick: Packing Kit

Qty Part Number

1 D2071

Description

Cable

Batch

1339559

SD

18.0

AN34A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bolt

Pick: Packing Kit

Qty Part Number

4 AN3-4A

Description

Bolt

Batch

1103287

SD

19.0

AN5261032R9

Screw



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Screw

Pick: Packing Kit

Qty Part Number

4 AN526-1032R9

Description

Screw

Batch

1101189

or AN526C1032R9

SD

20.0

MS21042L3

Nut



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Nut

Batch:

1109031

8/11/21

SD

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Job Number: 41317

Part Number: D206558041

Job Number:



Seq. #:

Machine Or Operation:

Description :

21.0

AN960JD10L

Washer



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Washer

Pick: Packing Kit

Qty Part Number Description Batch

6 AN960JD10L Washer

M105793

SP

22.0

MS21919DG5

Clamp



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Clamp

Pick: Packing Kit

Qty Part Number Description Batch

2 MS21919DG5 Clamp

or MS21919WDG5

M107012

M107591

SP

23.0

MS354899

Grommet



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Grommet

Pick: Packing Kit

Qty Part Number Description Batch

1 MS35489-9 Grommet

M9619

8/11/21

SP

24.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

8/11/24

25.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206-558-041

Location:

PPP Rev:

8/11/24

SP

26.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/11/27

Job Completion



h don't

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

3.0 CARGO MIRROR INSTALLATION

Install the Cargo Mirror as follows:

1. Install D206-558-041/-043 cargo mirror assembly using AN3-4A bolts and AN960JD10L washers. Pickup existing anchor nuts in 4 places.
2. Install D2067 connector onto D2056 bellcrank assembly to locate hole for MS35489-9 grommet. With the mirror in the deployed position, mark and drill $\varnothing 0.125"$ (3.2mm) hole in landing light window panel where the grommet should be located. Open pilot hole to $\varnothing 0.563"$ (14.3mm). Install grommet.
3. Install D2053 bracket using AN526-1032R9 screws. Pickup on existing anchor nuts.
4. Position D2071 cable as shown. Install MS21919DG5 clamps using AN526-1032R9 screws where required. Pickup existing rivnuts or anchor nuts if available.
5. Install D2071 control cable using D2067 connector. Connector should rotate freely in bellcrank when MS21042-3 nut is torqued and cable clamped

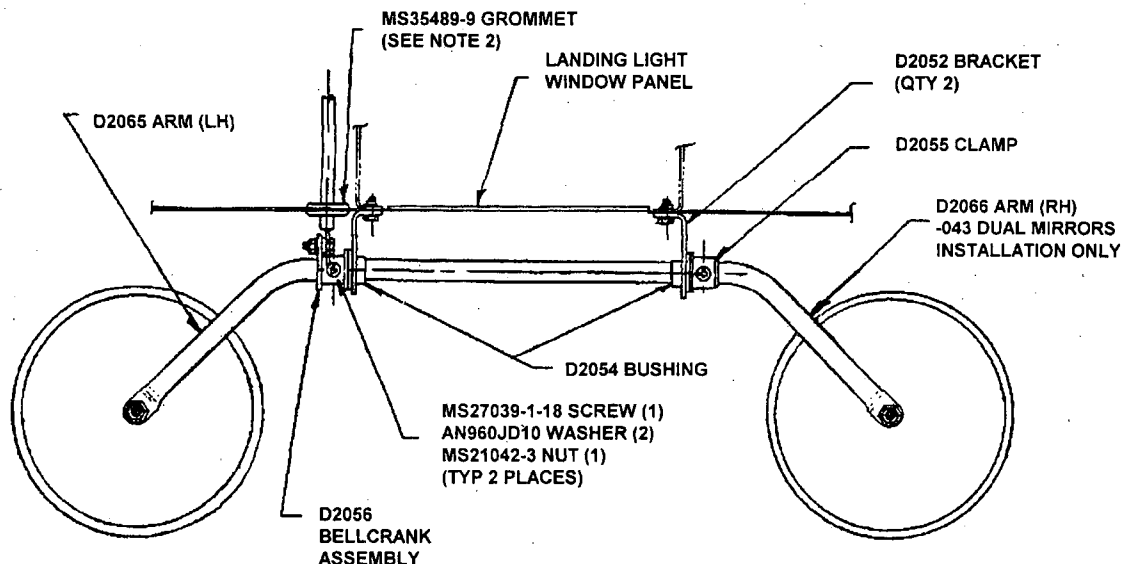


Figure 2: – View A: Looking Aft.
(D206-558-043 Mirror Shown)

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WORK ORDER
NO. 4137

DART

Dart Aerospace Ltd.

1270 ABERDEEN ST.

HAWKESBURY, ON, CANADA K6A 1K7

TC APPROVAL # 09-89

TEL: 1-613-632-5200

P/N	D206-558-041	CHG	CHG007
DESC.	Single Cargo Mirror Assy	STC	SH92-17
LOT	B41317	STC	SH1031NE
MODEL	206A/B/L/L1/L3/L4/407	STC	

MADE IN CANADA

D2729-1

DART

Dart Aerospace Ltd.

1270 ABERDEEN ST.

HAWKESBURY, ON, CANADA K6A 1K7

TC APPROVAL # 09-89

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P/N	D206-558-041	CHG	CHG007
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LOT	B41317	STC	SH1031NE
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DESC.	Single Cargo Mirror Assy	STC	SH92-17
LOT	B41317	STC	SH1031NE
MODEL	206A/B/L/L1/L3/L4/407	STC	

MADE IN CANADA

D2729-1

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1270 ABERDEEN ST.

HAWKESBURY, ON, CANADA K6A 1K7

TC APPROVAL # 09-89

TEL: 1-613-632-5200

P/N	D206-558-041	CHG	CHG007
DESC.	Single Cargo Mirror Assy	STC	SH92-17
LOT	B41317	STC	SH1031NE
MODEL	206A/B/L/L1/L3/L4/407	STC	

MADE IN CANADA

D2729-1

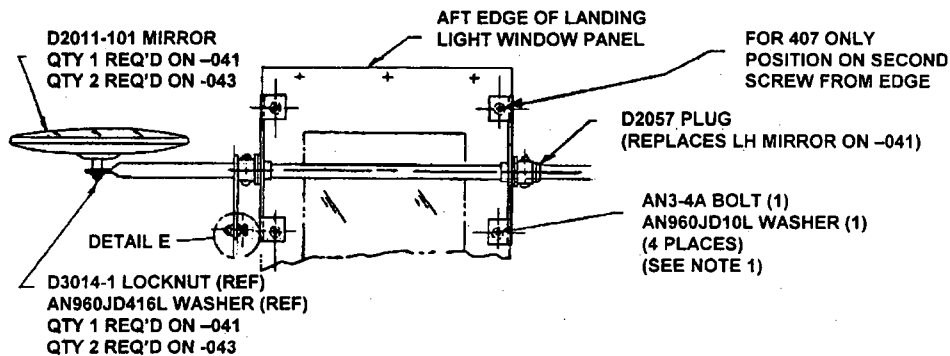


Figure 3: - View C: Looking Down on Mirror Installation
(D206-558-041 Mirror Shown)

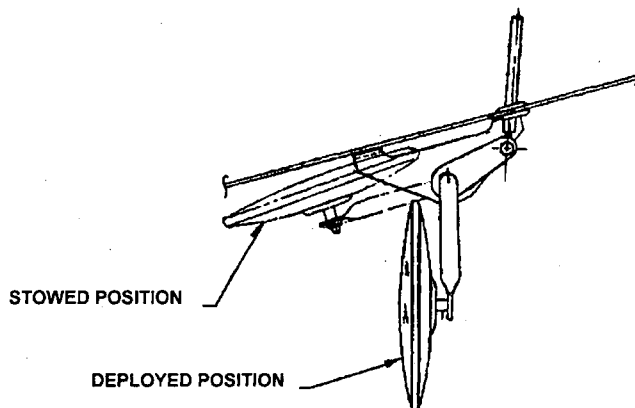


Figure 4: - Detail D: Looking from Side on Mirror Installation
(D206-558-041/-043 Mirror Shown)

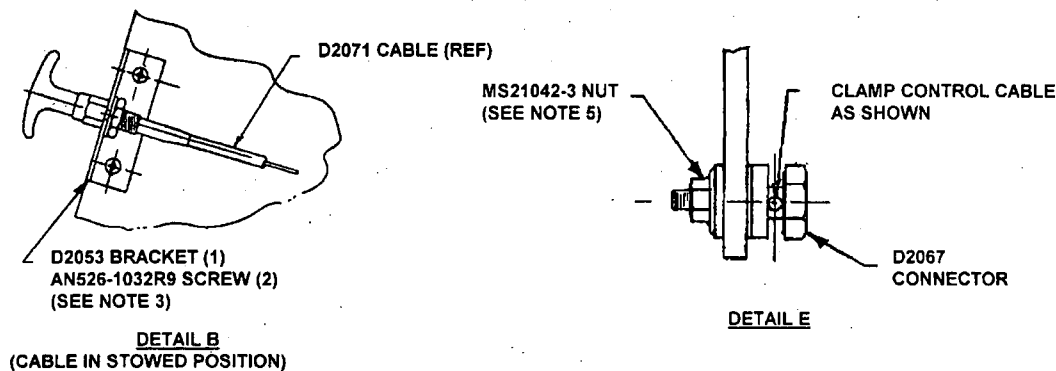


Figure 5: - Details B and E on Mirror Installation
(D206-558-041/-043 Mirror Shown)

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WORK ORDER

NO. 4317

4.0 WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D206-558-041 Bell 206A/B/L/L1/L3/L4 Bell 407	2.4 lb 1.09 Kg	+5.0 in +0.13 m	+12.0 in-lb +0.14 m-Kg	+14.8 in +0.38 m	+35.5 in-lb +0.41 m-Kg
D206-558-043 Bell 206A/B/L/L1/L3/L4 Bell 407	3.0 lb 1.36 Kg	0.0 in 0.0 m	0.0 in-lb 0.0 m-Kg	+14.8 in +0.38 m	+44.4 in-lb +0.52 m-Kg

5.0 WEIGHT AND BALANCE

Qty -041	Qty -043	Part Number	Description
X		D206-558-041	SINGLE CARGO MIRROR ASSEMBLY
	X	D206-558-043	DUAL CARGO MIRROR ASSEMBLY
1	2	D3014-1	* LOCKNUT
1	1	D2071	CABLE ASSEMBLY
2	2	D2054	BUSHING
1	1	D2067	CONNECTOR
	1	D2066	ARM
1		D2065	ARM
1		D2057	PLUG
1	1	D2056	BELLCRANK ASSEMBLY
1	1	D2055	CLAMP
1	1	D2053	BRACKET
2	2	D2052	BRACKET
1	2	D2011-101	MIRROR ASSEMBLY
4	4	AN3-4A	BOLT
4	4	AN526-1032R9	SCREW
1	2	AN960JD416L	* WASHER
4	4	AN960JD10	WASHER
6	6	AN960JD10L	WASHER
3	3	MS21042-3	NUT (or MS21042L3)
2	2	MS21919DG5	CLAMP
2	2	MS27039-1-18	SCREW
1	1	MS35489-9	GROMMET

* INCLUDED AS PART OF D2011-101 MIRROR ASSEMBLY

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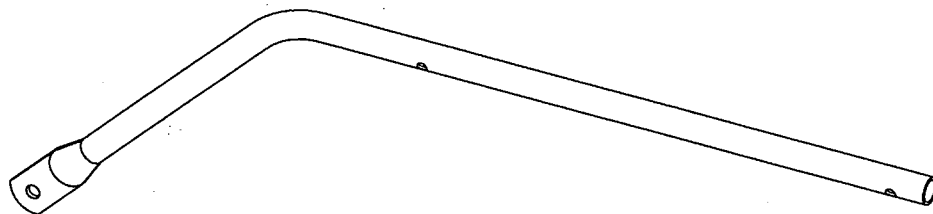
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WORK ORDER

NO. 41317

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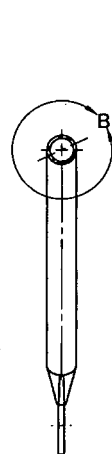
D2065 ARM

RELEASED
08.07.25.17

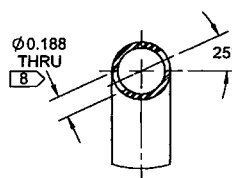
C	REDRAWN IN SOLIDWORKS; INCORPORATED REV. B1 (FINISH ADDED VIA HAND CHANGE) (ZN A6-2); ADD D2065F CUT LENGTH DETAIL FOR D2065 (ZN B3-2); ADD R1.50 DIMENSION (ZN D5-2); Ø0.500 X 0.049 WALL WAS Ø0.500 X 0.035 WALL (ZN A5-2); REASON: Ø0.500 X 0.035 WALL TUBING USED ON D2010 IS CRACKING DURING SERVICE	PH	08.06.13
B	RE-DESIGN	BW	98.02.06
A	NEW ISSUE	BW	92.03.12
REV.	DESCRIPTION	BY	DATE
DESIGN	BW	DART AEROSPACE LTD	
DRAWN	PH	HAWKESBURY, ONTARIO, CANADA	
CHECKED	DS	DRAWING NO.	REV. C
MFG. APPR.	PH	D2065	SHEET 1 OF 2
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DE APPR.	PH	ARM	NTS
DATE	08.06.13	<small>COPYRIGHT © 1992 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

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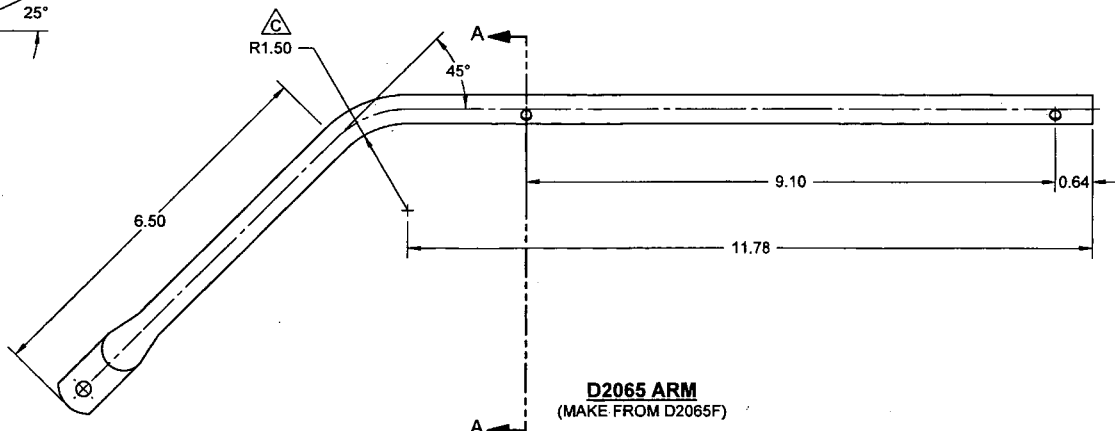
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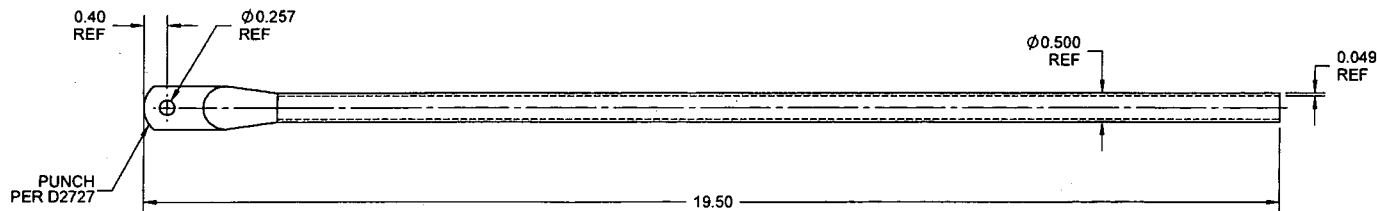
SECTION A-A



DETAIL B
SCALE 3X
2 PL



D2065 ARM
(MAKE FROM D2065F)



D2065F ARM CUT LENGTH DETAIL

RELEASED
08.07.25.18

- NOTES:
- 1) MATERIAL: D2065F: AISI 304/316 SS SEAMLESS ROUND TUBING, $\phi 0.500 \times 0.049$ WALL (REF DART SPEC M304TR0.500W.049)
 - 2) FINISH: POWDER COAT BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.41lbs
 - 8) DRILL 0.188 AFTER BENDING

DESIGN	BW	DART AEROSPACE LTD	
DRAWN	PH	HAWKESBURY, ONTARIO, CANADA	
CHECKED	LS	DRAWING NO.	REV. C
MFG. APPR.	LS	D2065	SHEET 2 OF 2
APPROVED	LS	TITLE	SCALE
DE APPR.	LS	ARM	NTS
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